

Application Serial No.: 10/799,503  
Attorney Docket No.: 0160113

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### REMARKS

This is in response to the *Non-Final* Office Action of September 4, 2007, where the Examiner has rejected claims 1-45. By the present Amendment and Response, applicant has amended claims 1-2, 12-13, 22-23 and 28-29. After the present Amendment and Response, claims 1-45 remain pending in the present application. Reconsideration and allowance of outstanding claims 1-45 in view of the following remarks are requested.

A. Rejection of Claims 1-10, 12-20, 22-26, 28-32 and 34-45 under 35 USC

§102(b)

The Examiner has rejected claims 1-10, 12-20, 22-26, 28-32 and 34-45, under 35 USC §102(b), as being anticipated by Kroon (USPN 5,664,055) ("Kroon").

In order to clarify the invention of claim 1, by the present amendment, claim 1 has been amended to recite "wherein each of said plurality of voicing indexes is indicative of one of a plurality of classes of said input speech signal, wherein each of said plurality of classes of said input speech signal represents a different degree of periodicity of said input speech signal."

Applicant respectfully submits that the present amendment is at least supported by Figure 2 of the present application and the written description on page 7, line 19 to page 8, line 10, as shown below:

The voicing index, which is transmitted by the encoder to the decoder, may represent the periodicity of the voiced speech or the harmonic structure of the signal. In another example embodiment, the voicing index may be represented by three bits thus providing up to eight classes of speech signal. For instance, Figure 2 is an illustration of a voicing index classification available to both the encoder and the decoder. In this illustration, index 0 (i.e. "000") may indicate background noise, index 1 (i.e. "001") may indicate noise-like or unvoiced speech signal,

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index 2 (i.e. "010") may indicate irregular voiced signal such as voiced signal during onset, and indices 3-7 (i.e. "011" to "111") could each indicate the periodicity of the speech signals. For instance, index 3 ("011") may represent the least periodic signal and index 7 ("111") may indicate the most periodic signal.

The voicing index information can be transmitted by the encoder as part of each encoded frame. In other words, each frame may include the voicing index bits (e.g. three bits), which indicate the periodicity degree of that particular frame.

Turning to Kroon, applicant respectfully submits that Kroon fails to disclose, teach or suggest a plurality of voicing indexes, where each of the plurality of voicing indexes is indicative of one of a plurality of classes of the input speech signal, wherein each of said plurality of classes of the input speech signal represents a different degree of periodicity of the input speech signal. It is respectfully submitted that the "index" referenced at column 1, lines 43-64 of Kroon is simply an index to the fixed codebook, and claim 1, as amended, is now patentably distinguishable over such broad reading of the "index" referenced in Kroon.

In addition, applicant has amended dependent claim 2 to further recite that "classes of said input speech signal include a background noise class, an unvoiced class, a first voiced class, a second voiced class, wherein said first voiced class has a lower degree of periodicity than said second voiced class." It is respectfully submitted that this amendment is at least supported by Figure 2 of the present application and the written description on page 7, line 19 to page 8, line 10, as shown above. Applicant respectfully submits that Kroon also fails to disclose, teach or suggest that each of the plurality of voicing indexes is indicative of one of a plurality of classes of the input speech signal, where classes of said input speech signal include a background noise class, an unvoiced class, a first voiced class, a second voiced class, wherein the first voiced class has a lower degree of periodicity than the second voiced class.

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Accordingly, for the reasons stated above, it is respectfully submitted that claim 1, as amended, is patentable over Kroon. In addition, independent claims 12, 22 and 28 include limitations similar to those of claim 1, as amended, and should be allowed for the same reasons stated above. Further, claims 2-10, 13-20, 23-26, 29-32 and 34-45 depend from claims 1, 12, 22 and 28, respectively, and should be allowed at least for the reasons stated above.

**B. Rejection of Claims 11, 21, 27 and 33 under 35 USC §103(a)**

The Examiner has rejected claims 11, 21, 27 and 33, under 35 USC §103(a), as being unpatentable over Kroon in view of Morii, et al. (PGPUB 2006/0206317) ("Morii").

Applicant respectfully submits that claims 11, 21, 27 and 33 depend from claims 1, 12, 22 and 28, respectively, and should be allowed at least for the reasons stated above.

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**C. Conclusion**

Based on the foregoing reasons, an early Notice of Allowance directed to all claims 1-45 pending in the present application is respectfully requested.

Respectfully Submitted,  
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